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A new Genus in the Dipterous Family Cyrtidae from South America.

By F. R. COLE, U. S. Bureau of Entomology.

(Plate XI)

In material received at the United States National Museum from Prof. F. Campos, of the Museum in Guayaquil, Ecuador, there was included a remarkable new Cyrtid. Through the kindness of Dr. J. M. Aldrich, of the National Museum, I am able to describe and figure this interesting specimen. Among other characters there is an almost unbelievable development of the antennae, and it is small wonder that some of the entomologists at the National Museum thought they were dreaming when they came across it in the collection.

CAMPOSELLA n. gen.

Head hemispherical, the occiput but little swollen. Eyes pilose, contiguous from vertex to base of antennae and widely separated from this point to the mouth opening, the space being deeply excavated, although the proboscis is quite rudimentary. Antennae in male about four times the length of the head; the first joint sunk in the head, the second ring-like

and short, the third enormous, about as wide as the vertical diameter of the head, flattened and blade-like. Proboscis about as long as height of head, small, cylindrical, pointed and with fine hairs on the surface; it is not rigid as in *Lasia* and *Eulonchus*, and is clearly rudimentary, not being adapted for feeding. Palpi are absent. The ocellar tubercle is rudimentary and there are no ocelli.

Thorax large and inflated as in *Lasia*, quite thickly pilose, the prothoracic lobes and upper pleura inflated and quite prominent. Upper surface of scutellum rather flattened. Postalar callosities of medium size. Squamae large and of thin texture, the surface and margins pilose. Legs of normal stoutness, all the tibiae enlarged at the tips and with a spur-like projection above. Tarsi slightly compressed laterally. Claws quite long and so formed that they can be brought together along the inner surfaces. *Pulvilli and empodia absent.*

Abdomen large and inflated in appearance, although the venter is flattened. Pile of abdomen quite noticeable. Genitalia similar to those of *Eulonchus*. Wing venation very near that of *Lasia*; the lower branch of the fourth vein has disappeared, however, and the upper branch of the third vein ends in the first just beyond its juncture with the second. In *Lasia* this is a variable character, but is constant in the species as far as known.

Genotype: Camposella insignata n. sp.

C. insignata n. sp.

♂.—Length 13 mm., length of antennae 5 mm. Head and eyes black with black pile. Eyes contiguous above and widely separated below the antennae. Antennae contiguous at base, first joint scarcely visible and yellow, second joint small, black and ring-like. The third antennal joint has a rounded, short basal portion which expands into a very large surface, flattened, very thin and rounded at the end. The third joint is about four times as long as the head and about 6-10 as wide as long; it is velvety black and destitute of pile. Proboscis rudimentary, slender, cylindrical and pointed, covered with very short black pile. Face black, deeply excavated below the antennae (see Pl. XI, fig. 1b). Occiput slightly swollen, the cheeks shining black and pointed below the eyes. Ocellar tubercle rudimentary, black, with a central depression which is thinly black pilose; ocelli absent.

Thorax large and inflated, brownish black in color, the anterior half thickly golden pilose with a few black hairs along the median line. Posterior half of the dorsum (more or less abraded in this specimen) black pilose, as are the postalar callosities. Scutellum colored as the thorax, flattened, of nearly uniform width, with black pile except in the center. Upper pleura inflated, yellow pilose above, black below. Squamae smoky hyaline, the surface and border with short black pile. Coxae blackish brown, the front pair yellowish pilose, the others black pilose. Femora blackish brown with black pile, paler at base and tip. Tibiae blackish, yellowish at tip, which is enlarged and with a slender spur above. Tarsi yellow, the claws yellow at base. Tibiae and tarsi with very fine, short yellow pile. *No empodia or pulvilli present.*

Abdomen very broad and inflated, but the venter flat, the general shape being very near that of *Lasia*, in which the fifth segment is much smaller than the fourth. The first three abdominal segments and basal half of fourth with rather short black pile, posterior to this the pile is golden yellow. Ground color of abdomen brownish black, near a dark mahogany color. Venter clothed with reclinate golden yellow pile. Genitalia blackish marked with yellow, with yellowish pile.

Wings brownish hyaline, a little darker near the base. Veins blackish. Venation nearly identical with that of *Lasia* (see Pl. XI, fig. 2). As in some species of *Lasia* the upper branch of the third vein (R₄) ends in the first (R₁+2+3) beyond its junction with the second. The lower branch of the fourth vein is missing.

This remarkable species would go in the subfamily Pano-pinae. Some of the genera in this group have a rudimentary proboscis, such as *Ocnasa* and *Astomella*. It has several characters in common with *Lasia*, the general shape of the body being strikingly near that genus and the venation is almost identical. The Leptidae, Nemestrinidae and Cyrtidae are separated from other families by having the empodia developed pulvilliform and it is remarkable that this species should have no sign of pulvilli or empodia. The claws close together along the inner edges as in some of the Asilidae, such as *Leptogaster*, some species of which have not even the usual bristle-like empodia. This would seem to be a very important and deep-seated character, but on account of its close resemblance to the genus *Lasia* it would not seem advisable to erect a new subfamily to receive it. Owing to the

great variation in this group of insects, characters which might be considered generic in other families are of only specific value here. Ordinarily the absence of pulvilli and empodia would place it in a new family, but it is clearly a Cyrtid, and there are no corresponding changes elsewhere in the organism. Most species of *Anthrax* lack pulvilli, but some have them, so this is a variable character in the nearly related Bombyliidae.

The antennae are very remarkable, but as we know only the male they may be a secondary sexual character. In the genus *Eulonchus* the third antennal joint is greatly enlarged and in *Ocnaca* (in the subfamily Panopinae) there are several species with a large third antennal joint. In *Ocnaca schwarzi* Cole from Cuba the third antennal joint is large and laterally compressed. In the Cyrtidae the two sexes are almost identical in appearance and if the remarkable antennae of *Camposella* are a male ornamental character it will be the first instance of this kind in the Cyrtidae. The unusual development of the antennae gives a great sensitive surface and it may be that this is utilized by the male in locating the female. The overdevelopment of one organ may be at the expense of another, and in this case the ocellar tubercle is rudimentary and the ocelli absent, but this is another variable character in the Cyrtidae.

In this species we have a connecting link between *Lasia* and *Ocnaca*. Parasitism has undoubtedly modified other genera in the Cyrtidae and we see here a changing species. The ancestral type was near *Lasia* and *Eulonchus*, both with a long proboscis; here the proboscis is aborted and the lower branch of the fourth vein has disappeared. It is undoubtedly a degenerate offshoot from the primitive type, the genus *Panops* in Australia being another such branch.

EXPLANATION OF PLATE XI.

Fig. 1. *Camposella insignata* n. gen. et sp. a. Last tarsal joint and claws, showing absence of pulvilli. b. Drawing showing excavated face and rudimentary proboscis. Most of the antennae are cut away in this view of the head.

Fig. 2. Wing of *Lasia* sp., nomenclature according to the Comstock system.